

### Abstract

The invention pertains to a method to optimize the welding energy input into the heating coil of a heating coil fitting. In particular, the invention pertains to a compensation method for the effects on the welding energy input from using a fundamental frequency outside the tolerance range for the AC welding voltage established for the heating coil fitting.

A generator is one option to supply power to a device for the implementation of the invention-based method. It supplies an AC welding voltage to the heating coil with a fundamental frequency outside the tolerance range for the AC welding voltage as marked out for the heating coil fitting. Another option is especially the use of DC welding voltage for the heating coils of heating coil fittings.

To execute the method, a welding power supply unit is connected to the contact elements of a heating coil fitting via connecting leads and connecting elements. The electrical parameters for the heating coil fitting are determined, especially the heating coil inductance of the heating coil. Based on the established effective AC welding voltage, a suitable welding voltage and welding time are then determined.